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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,525	10/01/2003	Peter R. Pawlowski	NGC-00044 (20-0141)	8317

7590 03/12/2007
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.EXAMINER

TSE, YOUNG TOI

ART UNIT	PAPER NUMBER
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2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/676,525

Applicant(s)

PAWLOWSKI ET AL.

Examiner

YOUNG T. TSE

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-7, 12, 19 and 25 is/are rejected.
- 7) ☒ Claim(s) 1-26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20031001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because the word "adjudication" is misspelled in block element 50 of both Figs. 2 and 4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: the reference sign "32" is not labeled in Fig. 3, as mentioned in paragraph [0021] of the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: in line 5 of paragraph [0020], "60 outputs" should be "60"; in both lines 2 and 3 of paragraph [0023], "100" should be deleted since they are not shown in Figs. 3 and 5; and in line 5 of paragraph [0028], "maximum" should be "maximum likelihood". Appropriate correction is required.

Claim Objections

4. Claims 1-25 are objected to because of the following informalities:

In claim 1, lines 3 and 7, the terms "a higher rate" and "the sampling rate divided by said first rate" are better change to "a second rate higher" and "the first rate divided by said second rate", respectively.

In claim 4, line 3, the word "that" should be deleted.

In claim 8, line 2, "(n-2)" should be "n-2". Also see claim 23.

In claim 10, line 2, "an averaging circuit" should be "an averaging circuit that is connected to said absolute value circuit" in order to provide connection or cooperation of the precedent claim 9.

In claim 12, line 1, "claim 11" should be "claim 10" to avoid the conflict of claim 11.

In claim 13, line 3, "circuits" should be "circuit".

In claim 15, lines 3-4, "one or two mark or space signals" should be "one, two mark symbols or two space symbols". Also see claims 19.

The dependent claims 2-3, 5-7, 9, 11 and 14 are directly or indirectly dependent upon the independent claim 1.

In claim 16, line 6, the word "and" should be deleted.

In claim 17, line 3, the term "a symbol rate divided by a sampling rate" is better change to "a transmitter rate divided by a sampling rate of the received signal".

In line 1 of both claims 22 and 23, "claim 16" should be "claim 17" since "n" is not recited in the precedent claim 16.

In claim 22, line 2, "(n+2)" should be "n+2".

In claim 26, line 1, "claim 18" should be "claim 19" to avoid the antecedent basis of "said output control circuit"; and line 4, "output of zero, one or two mark or space symbols" should be "an output of zero, one, two mark symbols or two space symbols".

The dependent claims 18, 20-21 and 24-26 are directly or indirectly dependent upon the independent claim 16.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 12 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 12 and 25 contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. For example, claims 12 and 25 recite an averaging circuit is a single pole, unity gain, low-pass filter which was not described in the specification.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 4 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 is vague and indefinite, if the antipodal circuit generates an antipodal signal, the summing circuit should not receive said antipodal signal and a receiver signal. See Fig. 2 of the invention.

In claim 19, line 3, "said selected signal" lacks antecedent basis; lines 5-6, the output control circuit lacks connection or cooperation with the threshold test circuit.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-2 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akashi U. S. Patent No. 6,671,074.

Akashi discloses a burst transmission system in Fig. 1 comprising a 2R regenerator 1 and a bit synchronizer 2. Wherein the bit synchronizer 2 comprises delay lines (200-20n), flip-flops (210-21n), shift registers (220-22n), an edge detection circuit (20), a phase selection circuit (21), and a selector (22).

Regarding claims 1 and 7, the delay lines (200-20n) correspond to the tapped delay line; the flip-flops (210-21n) and shift registers (220-22n) correspond to the timing hypothesis circuits coupled to said tapped delay line; and the edge detection circuit (20), the phase selection circuit (21), and the selector (22) correspond to the control and adjudication circuit coupled to said timing hypothesis circuits that compares outputs of said timing hypothesis circuits and selects one of said timing hypothesis circuits. See col. 1, lines 30-62.

Although Akashi does not explicitly show or suggest that the number of the flip-flops and shift registers is an integer equal to the sampling rate divided by said first rate plus two. It is the choice of design by an inventor to determine that how many of the flip-flops and shift registers to be used.

Therefore, it would have been obvious to one of ordinary skill in the art, for instance, to use different set of number in the delay lines than the flip-flops and the shift registers.

Regarding claims 2 and 5-6, the ATC circuit 12 of the 2R regenerator 1 provides with an automatic threshold value control function to discriminate and detect level "1" and level "0" by setting a threshold level in the middle of the received signal. Clearly, the received signal of the "1" and "0" levels is independent of modulation type, for example, transmitted by a transmitter and is FSK signals which is well known to a person skill in the art, as described in the discussion of the related art of the instant application.

Allowable Subject Matter

12. Claims 3-4, 8-11 and 13-15 would be allowable if rewritten to overcome the objection(s) set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
13. Claims 4 and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
14. Claims 16-24 and 26 would be allowable if rewritten to overcome the objection(s) set forth in this Office action.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yuan relates to a system including an A/D converter, a DC tracking loop connected to the A/D converter, and a multi-hypothesis bit synchronizer and a method for compensating for DC offset and/or clock drift on a wireless-enable device.

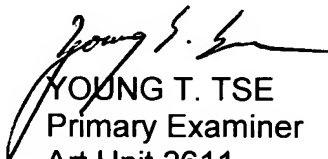
Hirota et al. relates to a burst synchronizing circuit synchronizes a received data signal in a burst fashion and sampling phases with which the received data signal is sampled.

Yuan et al. relates to a bit synchronizer for a digital receiver system accounts for loss of bit synchronization due to transmission phenomena.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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Art Unit 2611